



Strathprints Institutional Repository

Vironen, Heidi (2014) Collaborative approaches to developing and diversifying regional resource based economies, discussion paper prepared for the Arctic Connections conference. In: Arctic Connections, 2014-06-10 - 2014-06-11, Scotland. ,

This version is available at <http://strathprints.strath.ac.uk/51543/>

Strathprints is designed to allow users to access the research output of the University of Strathclyde. Unless otherwise explicitly stated on the manuscript, Copyright © and Moral Rights for the papers on this site are retained by the individual authors and/or other copyright owners. Please check the manuscript for details of any other licences that may have been applied. You may not engage in further distribution of the material for any profitmaking activities or any commercial gain. You may freely distribute both the url (<http://strathprints.strath.ac.uk/>) and the content of this paper for research or private study, educational, or not-for-profit purposes without prior permission or charge.

Any correspondence concerning this service should be sent to Strathprints administrator: strathprints@strath.ac.uk



SUMMARY

Many Arctic economic opportunities are based on natural resources including fisheries, oil, gas, minerals and forestry. Climate change presents opportunities for mineral resource development and other activities such as tourism. Economic diversification would help to reduce risks associated with dependence on natural resources, as well as creating jobs. The need to balance commercial and environmental interests paves the way for further cooperative efforts. There are opportunities to utilise complementary experience across Arctic and near-Arctic regions. Given that there is long-standing expertise in traditional resource-based sectors, cooperation could focus on various aspects of research and innovation as well as economic diversification.

OVERVIEW

The economies of the Arctic region are strongly reliant on natural resources. The exploitation of fish stocks, wood resources, oil, gas and minerals plays a key role in many local economies. Historically, fisheries have been a major industry across the Arctic¹, with forestry also playing a vital role. Increasingly, activities such as mining are intensifying in response to growing global demand and technological improvements.²

Climate change will impact upon the use of these natural resources. As a result of rising temperatures and the consequent melting of ice, prospects for further mineral resource development and other economic activities such as tourism will grow. At the same time, biological resources will face new pressures.⁵ Though natural resources contribute to economic development across the Arctic, future developments are likely to change the social, economic and environmental conditions in the region.

Natural resources in the Arctic

Oil and gas are estimated to represent 5-13 percent (oil) and 20-30 percent (gas) of total global reserves. Given the technical and physical challenges of the Arctic exploration, only around half of the identified geological basins have been surveyed for fossil-fuel resources.³ Other minerals include nickel, copper, coal, gold, uranium, tungsten and diamonds. Many known mineral reserves have not been exploited because of their inaccessibility and the steep development costs. Biological resources include diverse plant and animal species; forests; rivers, lakes and aquatic ecosystems; marine mammals and fisheries; and herds of caribou and reindeer.⁴

Economic diversification can help reduce the risks associated with high dependence on natural resources. It can also address demographic challenges (e.g. out-migration) by offering new and more attractive jobs. Tourism represents a valuable alternative for some locations with good natural amenities, but requires investment (services and amenities) and external transport connections, particularly in smaller

¹ Changing Nature of Arctic Fisheries (2013) *Factsheet*. Available at: http://www.arcticinfo.eu/images/Facksheet/Factsheets_Final/fishing_regular.pdf [accessed on 22 May 2014]

² Mining in the European Arctic (2013) *Factsheet*. Available at: http://www.arcticinfo.eu/images/Facksheet/Factsheets_Final/mining_factsheets_final.pdf [accessed on 22 May 2014]

³ According to the 2008 U.S. Geological Survey (USGS) estimate the Arctic may hold about 22 percent of the undiscovered conventional hydrocarbon reserves untapped worldwide. However, since most of the Arctic is still to be explored, many experts are sceptical of oil and gas reserve projections.

⁴ The Arctic (2014) *Natural Resources*. Available at: <http://arctic.ru/natural-resources>

⁵ Including: oil spills due to increased drilling activities; marine vessel pollution; diminished fish stocks due to intensive fishing; and the environmental impacts of mining on land, water, air and wildlife (e.g. reindeer breeding grounds).

settlements. Other alternatives include green branding (supporting eco-tourism), green mining technology, climate change research, Arctic and sub-Arctic products, and developing renewable energy sources.⁶

The territories in and near the Arctic compete for different natural resources and markets. However, **international cooperation has emerged as crucial to ensuring the sustainable use of such resources.** There is an increasing interest in balancing the industrial use of these resources with environmental interests. Innovation and the development of new processes and technologies will play an important role in meeting current and future challenges such as changing demand, global competition and environmental protection.⁷

TERRITORIAL COOPERATION

European Territorial Cooperation programmes will continue to address natural resources as a thematic focus, often in the context of broader environmental and energy priorities, and/or with crossover to other priorities (innovation, entrepreneurship) in the forthcoming 2014-2020 funding period:

- Arctic-relevant *INTERREG VB transnational programmes* with resource-relevant priorities and objectives (often alongside broader environmental and/or energy issues) include the Northern Periphery and Arctic, Baltic Sea Region, North Sea Region and North West Europe programmes.
- Arctic-relevant *INTERREG VA cross-border programmes* where resource-relevant issues are addressed (through Thematic Objective 6 on environment and sustainable use of resources) include the Nord, Botnia-Atlantica and Sverige-Norge programmes.

European Territorial Cooperation projects already focus on multiple aspects of resource-relevant issues. The INTERREG transnational Northern Periphery Programme (NPP) illustrates how different priorities (innovation, sustainable development) of the programme have supported a range of projects concerning natural resources, including: economically and environmentally sustainable fish farming;⁸ natural food processing;⁹ the development of regional woodland parks;¹⁰ sustainable forest-based activities;¹¹ sustainable tourism based on natural resources;¹² and marine based employment opportunities.¹³

Arctic programmes supported through the European Neighbourhood and Partnership Instrument (ENPI) have also targeted natural resources in the 2007-2013 funding period. For example, in the ENPI Karelia programme the forestry sector is included as an important cornerstone of economic cooperation. The sustainable development of natural resources is also addressed in the ENPI Kolarctic programme.

Non-EU led territorial cooperation initiatives are active taking a holistic approach to natural resource-based development. In the Arctic Council, one of the major areas of activity for the Sustainable Development Working Group (SDWG) is the holistic management of natural resources. Similarly, the Environment and Natural Resources Committee within the Nordic Council deals with issues concerning the exploitation of natural resources in the agriculture, fisheries and forestry sectors. The Committee also addresses energy policy in cooperation with the Business and Industry Committee.

⁶ Adapted from OECD Territorial Reviews (2011) *NORA Region, The Faroe Islands, Greenland, Iceland and Coastal Norway*, OECD Publishing.

⁷ *Ibid.*

⁸ For example, the NPP project APLIC: <http://www.northernperiphery.eu/en/projects/show/&tid=129>

⁹ For example, the NPP project Dear Food: <http://www.northernperiphery.eu/en/projects/show/&tid=41>

¹⁰ For example, the NPP project Developing Regional Woodland Parks: <http://www.northernperiphery.eu/en/projects/show/&tid=35>

¹¹ For example, the NPP project Northern-ToSIA: <http://www.northernperiphery.eu/en/projects/show/&tid=33>

¹² The example, NPP project E-smart: <http://www.northernperiphery.eu/en/projects/show/&tid=40>

¹³ The example, NPP project MBEO: <http://www.northernperiphery.eu/en/projects/show/&tid=42>

There are many other sector-specific cooperation initiatives in the Arctic. For instance, much of the cooperation in sectors such as fisheries takes place within wider international arenas¹⁴ or on a bilateral basis. Bilateral cooperation in mining is also set to increase, with examples including cooperation between Norrbotten in Sweden and Lapland in Finland¹⁵ or the 2007-2013 EU-Greenland Partnership, which included mineral resources as one of six areas of cooperation.¹⁶

Cooperation based on natural resources in the Barents

In the Barents Euro Arctic Council (BEAC), the Barents Forest Sector Task Force (a sub-group of the Working Group on Economic Cooperation) aims to create necessary conditions for the development of forestry, environmental care, and wood-based industries through cooperation, mutual concrete actions, projects and programmes.

In the Barents Regional Council (BRC) the focus of the Barents 2010 strategy has been on sector programmes, which are strongly oriented towards the natural resource potentials covering: forestry, mining and minerals, oil and gas, tourism, east-west logistics, and education.

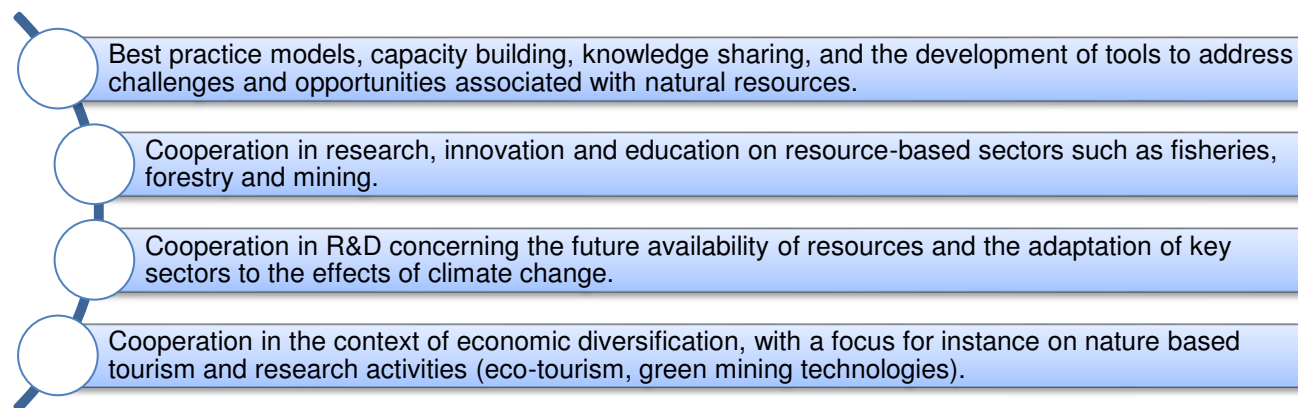
FUTURE POTENTIAL FOR COOPERATIVE ACTION

There is scope for more cooperation in the field of natural resources, building on distinctive and sometimes complementary expertise and experience. This could offer opportunities for the transfer of best practice models and the pooling of expertise to build capacity, share knowledge, and develop tools to help communities address the economic, environmental and social dimensions of natural resource management.

Given the long-standing expertise in traditional resource-based sectors, there may be scope to leverage resources for research through increased collaboration, knowledge sharing and joint support for specific sector-related research and innovation (e.g. fishing and fish farming), including cooperation by the region's institutions in the provision of education and training. The uncertainties related to the future availability of natural resources and the effects of climate change could be specific areas of focus.

Cooperation in the context of economic diversification could strengthen efforts to brand the region to offer, for instance, joint tourism products and to undertake coordinated marketing activities. Joint training packages and methods for small tourism entrepreneurs are other potential areas for cooperation.¹⁷

Specific areas for future potential action include:



¹⁴ Examples of such organisations include: the Norwest Atlantic Fisheries Organisation (NAFO); the North East Atlantic Fisheries Commission (NEAFC); the North Atlantic Salmon Conservation Organisation (NASCO); the North Atlantic Marine Mammal Commission (NAMMCO); and the International Council for the Exploration of the Sea (ICES).

¹⁵ Lapin Liitto (2012) *Lapin kansainvälisen toiminnan strategia 2015/2030*, Rovaniemi.

¹⁶ Mining in the European Arctic (2013) *Factsheet*. Available at: http://www.arcticinfo.eu/images/Facksheet/Factsheets_Final/mining_factsheets_final.pdf [accessed 22 May 2014]

¹⁷ OECD Territorial Reviews (2011) *op. cit.*

KEY QUESTIONS FOR DISCUSSION

- **From a regional perspective, what are the most pressing challenges in the resource-based economies of the Arctic region?**
 - How do natural resources and associated future opportunities and threats affect regional development in Arctic and near-Arctic regions?
 - How can regions seek to diversify their economic dependence on natural resources in a sustainable way?
- **How can territorial cooperation in general contribute towards addressing these resource-based challenges?**
 - Should the territorial cooperation initiatives concentrate on specific resource-based activities (fishery, forestry, mining, tourism, traditional livelihoods such as reindeer herding) or adopt a holistic approach? How could this be done?
 - How can territorial cooperation programmes tap into existing research and industrial expertise on natural resources across the Arctic and the near-Arctic?
- **How could a more collaborative approach between programmes, regional councils and other stakeholders (ARC-NET) address these challenges in specific ways?**
 - Is there scope to engage with or utilise existing expertise and know-how related to the sustainable management of natural resources with universities, or the various research institutes existing in the region?
 - How can territorial cooperation ensure that remote and rural Arctic and near-Arctic communities, which may be difficult to engage with due to peripherality, also benefit?
 - How can synergies between INTERREG, ENI and other territorial cooperation programmes be developed to improve the delivery of direct outputs and results in the field of sustainable resource management?